wherein said antibodies bind to Gag, Pol, or Env polypeptides of the virus designated HIV-1_{MAL} deposited at a the COLLECTION NATIONALE DES CULTURES DE MICRO-ORGANISMES (CNCM) under No. I-641.

38. The HIV-1 variant virus of any one of claims 34-37, wherein the nucleic acid of said HIV-1 variant virus can be detected by hybridization with a DNA probe selected from the group of nucleic acids consisting of the genomic cDNA of HIV-1_{MAL} and restriction enzyme fragments of the cDNA of HIV-1_{MAL}, and wherein the restriction enzyme is selected from the group consisting of *Ava*I, *Bam*HI, *Bgl*II, *EcoR*I, *Hinc*II, *Hind*III, *Kpn*I, *Nde*I, *Pst*I, *Sac*I, and *Xba*I.

REMARKS

Reconsideration of this application is respectfully requested.

Applicants have canceled claims 1-6 and 22, and added new claims 23-38. Support for these claims is found throughout the specification, for example in original claim 1. Additional support is found in the specification at pages 2-3, bridging paragraph, which states:

> In accordance with this invention, a new virus has been discovered that is responsible for diseases clinically related to AIDS that can be classified as a LAV-1 virus but that differs genetically from known LAV-1 viruses to a much larger extent than the known LAV-1 viruses differ from each other. The new virus is basically characterized by the cDNA sequence which is shown in Figures 7A to 7I, and this new virus is hereinafter generally referred to as "LAV_{MAL}".

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Further support can be found in Figure 4A, which shows that HIV-1 variant HIV-1_{MAL} differs genetically from HIV-1_{BRU} to a greater extent in Gag, Pol, and Env (12%, 7.7%, and 21.7%, respectively) than HIV-1_{ARV-2} differs from HIV-1_{BRU} in Gag, Pol, and Env (3.4%, 3.1%, and 13.0%, respectively). Figure 4A also shows that HIV-1 variant HIV-1_{ELI} differs genetically from HIV-1_{BRU} to a greater extent in Gag, Pol, and Env (9.8%, 5.5%, and 20.7%, respectively) than HIV-1_{ARV-2} differs from HIV-1_{BRU} in Gag, Pol, and Env (3.4%, 3.1%, and 13.0%, respectively).

Further support is found on page 5, lines 12-30, and pages 32-33, bridging paragraph, which describe the interaction of HIV-1_{MAL} with antibodies in AIDS patient serum, and on page 7, lines 25-30, which describe that the HIV-1 variant HIV-1_{MAL} cross-reacts immunologically with other HIV-1 viruses.

Support for the conservation of the genetic organization of HIV-1 variants in claim 23 can be found on pages 8-9, bridging paragraph. Support for cDNA and DNA restriction fragments of HIV-1_{MAL} as probes for detecting HIV in claims 24 , 25, and 38 can be found on page 20, lines 1-19, pages 24-27 and in Figures 1A and 1B. Support for claim 30 can be found in Figure 4A, which shows that HIV-1_{ELI} and HIV-1_{MAL} differ from each other by 10.8% in Gag, 8.4% in Pol, and 19.8% in Env. Accordingly, no new matter enters by amendment.

The Examiner requires that applicants make reference to the status of previously filed applications on which applicants rely for priority. Applicants have amended the specification to recite the status of Application Ser. No. 08/154,397. Applicants note that the status of

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application 07/988,530 was appropriately given as "now abandoned" in the March 13, 1998, request for filing a continuation application. Applicants further note that a copy of the French priority document was submitted in application Ser. No. 07/038,330 filed April 13, 1987.

The Examiner objects to the drawings, stating that drawings with the appropriate corrections will be required when the application is allowed. Applicants acknowledge with appreciation that the Examiner will hold this objection in abeyance until the application is allowed.

Claims 1-3 and 5-7 were rejected under 35 U.S.C. § 112, second paragraph, for allegedly being indefinite for failing to particularly to point out and distinctly claim the subject matter, which applicants regard as the invention. Specifically, the Examiner contends that claim 1 is confusing, and that it is not clear if the claim refers to an actual viral preparation or a molecular clone encoding the virus. The Examiner also contends that it is not clear if claim 1 encompasses genetically related viruses.

Applicants have canceled claim 1 and added new claims 23-38 to particularly to point out and distinctly claim the subject matter, which applicants regard as the invention. Applicants submit that the amended claims clearly refer to "A purified HIV-1 variant virus" and that the claim language encompasses a genus of viruses. Applicants respectfully submit that the amendments obviate this rejection. Applicants further submit that the cancellation of claims 2, 3, and 5-6, and 22 obviates the rejection of these claims, since new claims 23-38 do not contain the recitations cited by the Examiner as confusing.

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Claim 4 was rejected under 35 U.S.C. § 102(b) as being anticipated by either Alizon et al. or Wain-Hobson et al. The Examiner alleges that Alizon et al. discloses LAV cDNA probes capable of hybridizing to LAV, and that Wain-Hobson et al. discloses the preparation of LAV cDNA probes.

Applicants have canceled claim 4. Applicants submit that new claims 23-38 cannot be anticipated by Alizon et al. or Wain-Hobson et al., since the genus of HIV-1 viruses claimed by applicants differ genetically from the virus described by Alizon et al. or Wain-Hobson et al. (Specification at 1-3.) Accordingly, applicants respectfully request withdrawal of the rejection.

Claims 5 and 6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Alizon et al. and Wain-Hobson et al. in view of Stabinsky et al. and Saiki et al.

Applicants have canceled claims 5 and 6. Applicants submit that new claims 23-38 are cannot be considered obvious over Alizon et al. or Wain-Hobson et al. in view of Stabinsky et al. and Saiki et al. since none of these references teach or suggest an HIV-1 variant virus that differs genetically from the group of viruses consisting of HIV-1_{IIIB}, HIV-1_{BRU}, and HIV-1_{ARV-2} greater than 3.4 % in Gag, 3.1% in Pol, and 13.0% in Env. Accordingly, applicants respectfully request withdrawal of the rejection.

Applicants respectfully submit that this application is in condition for allowance and request the issuance of a Notice of Allowance. In the event that the Examiner disagrees, he is invited to call the undersigned to discuss any outstanding issues remaining in this application in order to expedite prosecution.

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If there are any other fees due in connection with the filing of this paper, please charge such fees to our Deposit Account No. 06-0916. If an extension of time is required under 37 C.F.R. § 1.36 and not accounted for above, such an extension is respectfully requested, and the fee should be charged to Deposit Account No. 06-0916.

Respectfully Submitted,

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